REMARKS

I. Status of the Claims

Claims 1, 3-4 and 16-21 are currently amended.

Claims 2 and 5–15 are cancelled without prejudice.

Claims 1, 3–4 and 16–22 are pending.

II. Claim Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 1, 3-4, and 16-22 are rejected in the Office Action of January 26, 2010 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In response, the phrase "consisting essentially of" is deleted and replaced by "comprising" in claims 1 and 22. All pending claims are believed to fully comply with the requirements of 35 U.S.C. § 112, first paragraph.

III. Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

In the Office Action, claims 1, 3-4 and 16-22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. In reply, claims 1, 3-4 and 16-22 are currently amended in accordance with the Examiner's suggestions. As amended, all pending claims are believed to fully comply with the requirements of 35 U.S.C. § 112, second paragraph.

IV. Claim Rejections Under 35 U.S.C. § 102

In the Office Action, claims 1, 3-4 20 and 22 are rejected under 35 U.S.C. §102(b) as anticipated by WO 94/19950 (hereinafter "WO '950"). The Office Action takes the position that each and every claimed feature is disclosed in the cited reference. In response, Applicants respectfully traverse. Firstly, *WO '950* does not disclose application of a mixture consisting of only isolated bacteria and yeasts in an inert vehicle, as per claim 1 as currently amended. The claim amendments are made for only the reasons discussed above with respect to the rejections under 35 U.S.C. §112. In contrast to claim 1, the treatment mixture disclosed in *WO '950* is a fermentation broth containing not only various lactobacilli and yeasts, but ethanol, lactic and acetic acid (p. 13, 9-14; p. 14, lines 7-12), substrate for the mixed culture (p. 5, line 23) such as sucrose or molasses (p. 7, lines 23-26), flour, other microorganisms possibly introduced from the flour (p. 12, lines 5-9), and mucilage (p. 15, lines 1-2). Secondly, the Office Action confuses treatment of vines with description in *WO '950* of the use of Cabernet grapes for initiating the sourdough starter (p. 11,

lines 24-p. 12, line 10). There is no disclosure by *WO '950* of applying a bacterium- and yeast-containing composition to a vine. All of the experimental examples in *WO '950* involve treatment of fruit (*i.e.*, mangos and avocados). For at least these reasons, claims 1, 3-4 20 and 22 distinguish over the teaching of *WO '950.*

V. Claim Rejections Under 35 U.S.C. § 103(a)

In the Office Action, claims 1, 3-4 and 16-22 are rejected under 35 U.S.C. §103(a) as obvious over *WO '950* in view of U.S. Patent No. 4,981,618 ("*Bruneteau*") and newly cited U.S. Patent No. 5,525,132 ("*Shanmuganathanda*") and U.S. Patent No. 6,599,503 "*Luz*"). The Office Action appears to take the position that it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to use the sphingolipids of *Bruneteau* in place of the yeast and bacterium mixture in a concentration and ratio, thereof disclosed by *WO '950.*

WO '950 is as described above. *Bruneteau* teaches that sphingophospholipids containing inositol are useful as inducers of resistance to various cryptogamic diseases in plants, in particular in cereals such as wheat and corn and are also effective, in the absence of pathogenic fungi, to enhance the metabolism and physiology of the healthy plant. In that context, several examples are given wherein seeds are dipped in a composition containing said compounds. The treatment mixture used by *Bruneteau* contains specific chemical compounds in pure state or in the form of mixtures (*e.g.*, fractions, isolated from mycelia extracts of strains of Phytophthora) (Abstract; col. 1, line 46-col. 3, line 59 of *Bruneteau*). Notably, neither *WO'950* nor *Bruneteau* teach or suggest treating a vine, much less applying to a vine a combination of at least one isolated bacterium of the genus *Bacillus, Pseudomonas, Serratia* or *Streptomyces* and at least one isolated yeast.

To the contrary, *WO '950* teaches away from the use of isolated bacteria and yeasts (p. 4, line 23-p. 5, line 14), describing various problems and drawbacks of using biocontrol agents in horticulture, including difficulties in verifying effectiveness, lack of reproducibility, inoculum production and application cost, and lack of evidence of use of natural isolates on a commercial scale (p. 1, line 20-p. 2, line 30). *WO '950* also discourages the use of chemicals for treating horticultural diseases (p. 2, lines 22-30). Applicants submit that at least in view of the teaching away by *WO '950*, one of ordinary skill in the art at the time of the invention would have been discouraged from combining *WO '950, Bruneteau, da Luz* and *Shanmuganathan* as suggested by the Office Action. As the complex sourdough mixture of *WO '950* is clearly believed by

WO '950 to be advantageous over methods that use chemicals or isolates of bacteria or yeasts, the person of ordinary skill in the art would not have considered the method of *WO '950* ready for the modifications proposed in the Office Action.

In addition, or in the alternative, in view of the teaching by *WO '950* that the sourdough fermentation mixture is intended to overcome drawbacks and problems associated with using microbial isolates or chemicals, the person of ordinary skill in the art would have been discouraged or disinclined to replace the biocontrol agent of *WO '950* with a composition containing only isolated bacterium and yeast in an inert vehicle. To do so would take away the particular advantages extolled by *WO '950.*

Moreover, even if, *arguendo*, *da Luz* and *Shanmuganathan* teach biocontrol of certain fungal pathogens using the B. megaterium species or Dabaryomyce yeast, there is no teaching or suggestion in any of the cited references to combine them as required in any of claims 1, 3-4, or 16-22 for specific treatment of a vine, or for treating powdery mildew, blue mould or Botrytis (as per claim 20). The teaching of *da Luz* and *Shanmuganathan* do not overcome the teaching away by *WO '950* from the claimed methods.

Further, with respect to claim 19, the Office Action takes the position that to select particular concentrations is clearly within the skill of an ordinary artisan because *WO '950* teaches at page 11, line 23, the 10^{10} concentrations of yeast and bacteria as disclosed are very close to the concentrations recited in claim 19. Applicants respectfully disagree. At p. 11, line 23 of *WO '950*, the concentration of yeast in the starter culture is only 2×10^3 cfu/g while the concentration of lactobacilli is significantly greater at 10^{12} cfu/g. Importantly, it is not the starter culture which is applied to the fruit in *WO '950.* Instead, the biocontrol agent applied to the fruit is made by optionally decanting alcohol and acids from the starter culture, mixing with flour/water paste, and incubating the mixture 24 hrs. to 5 days, as described at (p. 9, lines 23-31; p. 16, lines 9-10). *WO '950* cautions that yeast population growth seems to be very sensitive to both oxygen availability and ethanol concentration (p. 12, line 29-pg. 13, line 4). Thus, the relative concentrations of yeast and bacteria in the mixture as applied to the fruit is not specified, and there is no reasonable basis for concluding that *WO '950* discloses the same 10^{10} concentrations of both yeast and bacteria as per claim 19. Claim 19 is currently amended to recite the applicable concentration unit (*i.e.*, per liter), consonant with paragraph [0034], for

example, of the instant published application U.S. 20050271629. There is no reasonable basis in the disclosure of *WO '950* for concluding that the applied concentration of bacteria and yeast in *WO '950* are the same as those specified in claim 19.

Further, as to claim 21, the Office Action takes the position that a one to one mixture clearly suggests an equal mixture of yeast and bacteria, thus, a 50/50 ratio is suggested and would have been expected to provide successful results for a mixture of bacteria and yeasts. Applicants respectfully disagree and submit that the Office Action misinterprets p. 9, lines 23-31 and p. 11, lines 19-23 of *WO '950*. If the starter culture having up to 10^{12} cfu/g of lactobacilli and 2 x 10^3 cfu/g Saccharomyces cerevisiae were cut 1:1 with flour and water paste, the resulting concentration would still be an unequal mixture of yeast and bacteria.

Applicants submit that for at least these reasons, claims 1, 3-4 and 16-22 are nonobvious over *WO '950* in view of *Bruneteau, Shanmuganathanda and Luz.*

VI. Conclusion

Applicant respectfully requests reconsideration and withdrawal of the rejections, and allowance of all pending claims. A Petition for one-month extension of time and the associated fee accompanies this paper. If any necessary fee has been inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C., Houston, Texas, Deposit Account No. 03-2769, and consider this a petition for any necessary extension of time.

Respectfully submitted,

Carol G. Mintz

Carol G. Mintz
Reg. No. 38,561
CONLEY ROSE, P.C.
P.O. Box 3267
Houston, Texas 77253-3267
Tel: (713) 238-8000
Fax: (713) 238-8008
AGENT FOR APPLICANT